B33E-1657: CREATING AND ACCESSING THE GLOBAL FLUXNET DATA SET

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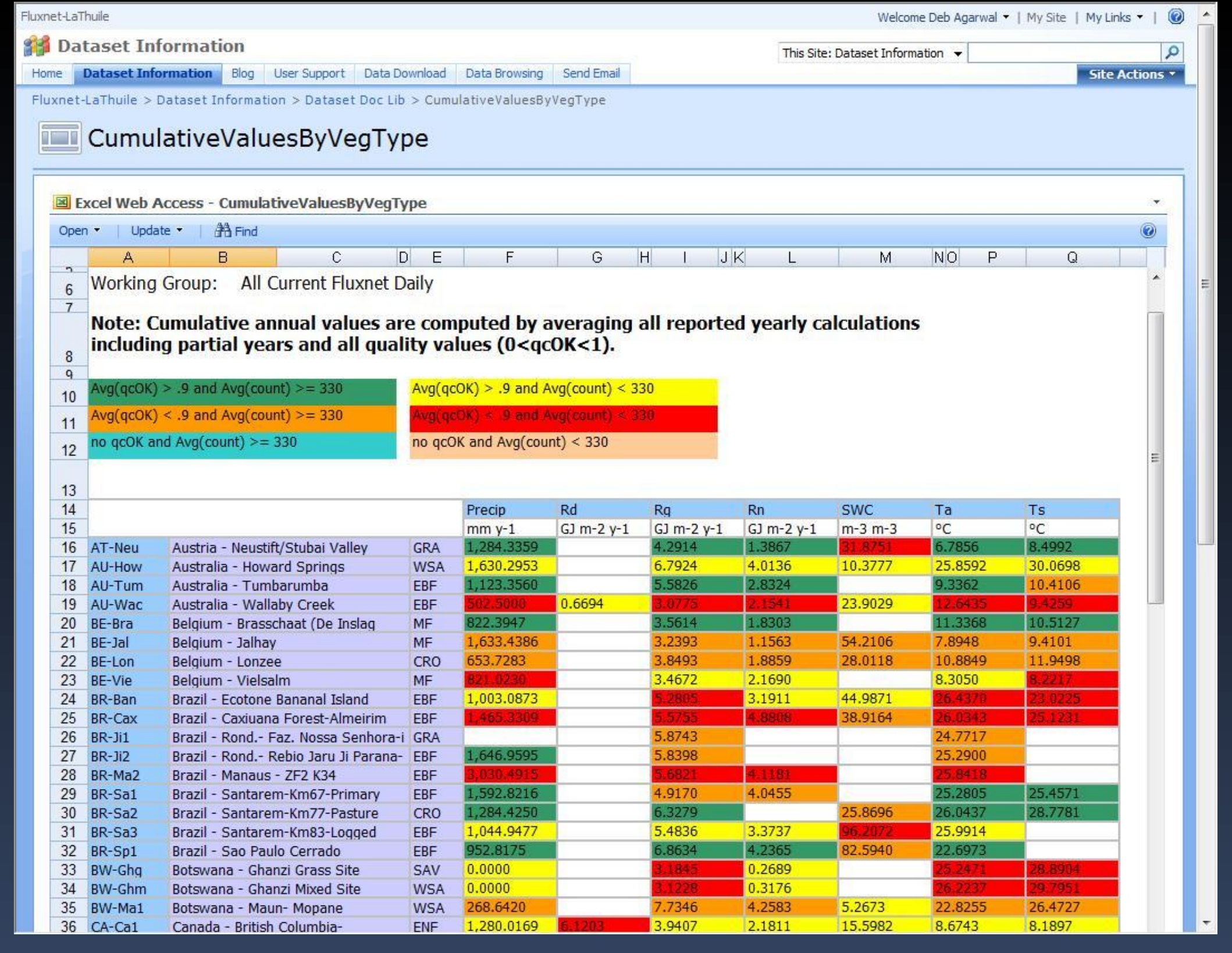
Abstract

The recently gathered FLUXNET synthesis dataset contains over 900 site years of eddy covariance data from over 240 sites. Over the last year, the raw data supplied by individual tower investigators has been uniformly processed to produce a quality assessed and gap-filled science data product. The dataset also contains associated site ancillary data such as site climate characteristics and soil parameters. The resulting collection is now being used by scientists world wide.

The size of the dataset is such that data browsing is difficult. For instance, a search of the dataset for sites with particular meteorological or flux characteristics would require a download of the complete dataset and then running all of the data through a preliminary analysis. Using commercial database technologies, we enable interactive data browsing as well as automated generation of data summaries for quick reference.

The use of the dataset is currently limited to FLUXNET scientists for cross-site synthesis analyses only. We have leveraged commercial collaboration software to both protect and simplify access. Since data cleaning Over time, the dataset will become more generally available to other scientific communities.


Fluxnet-LaThuile

Dataset Information

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Fluxnet-LaThuile > Dataset Information > Dataset Doc Lib > CumulativeValuesByVegType

CumulativeValuesByVegType

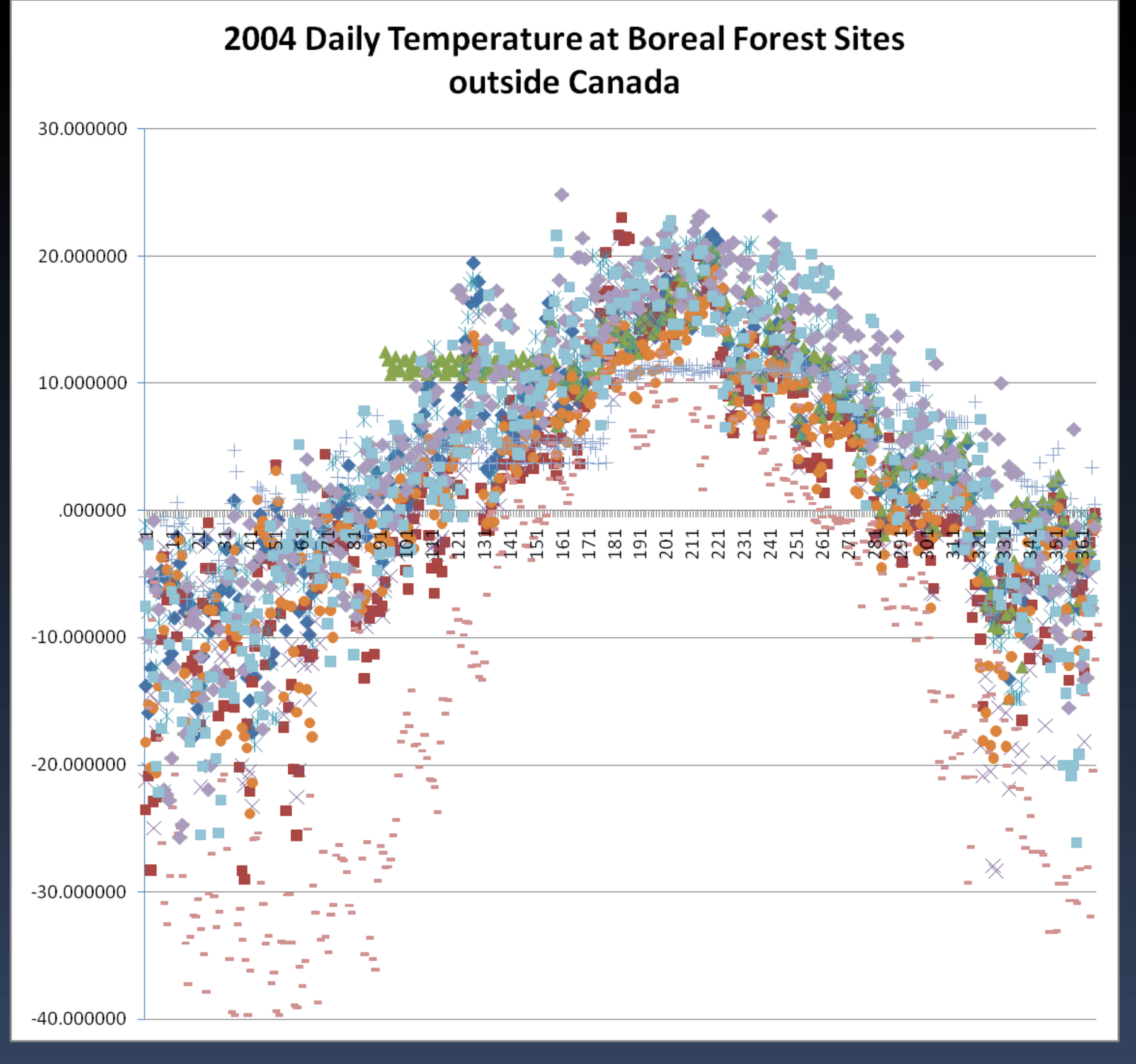
Excel Web Access - CumulativeValuesByVegType

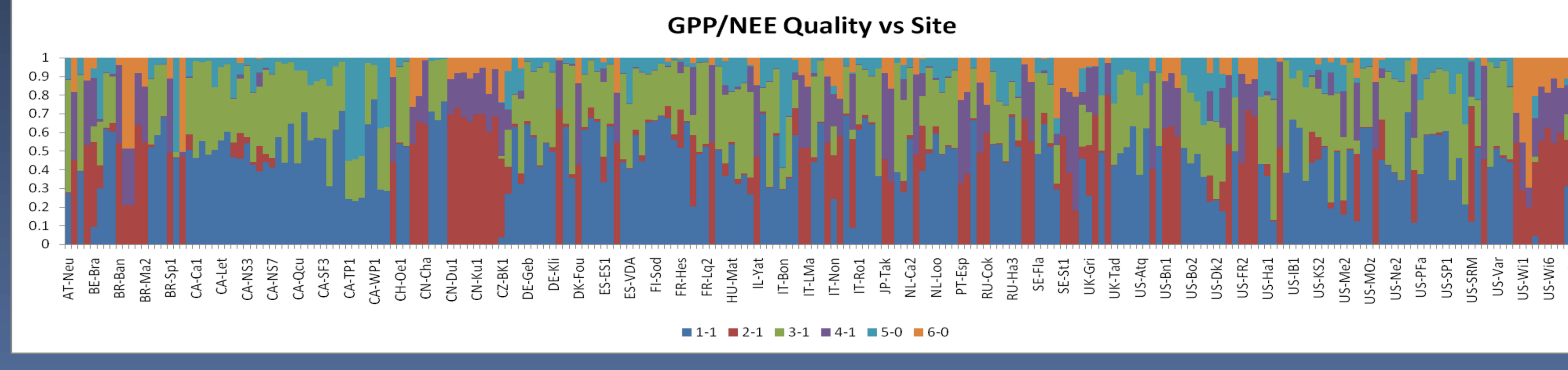
Working Group: All Current Fluxnet Daily

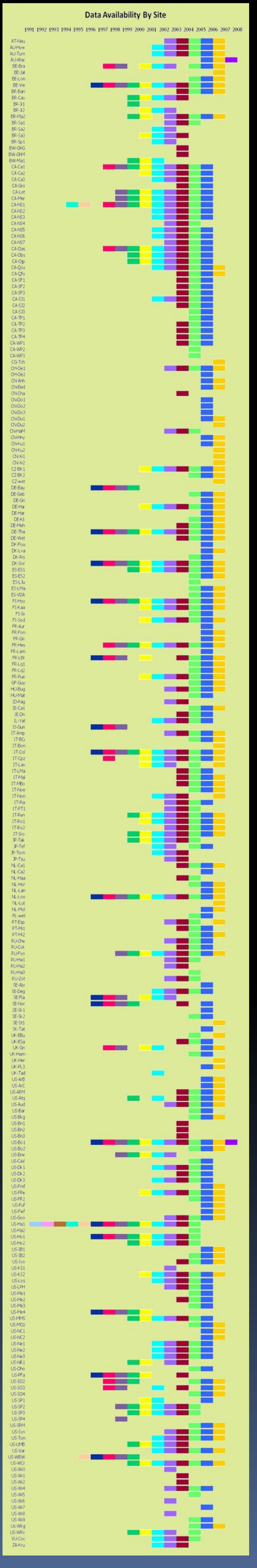
Note: Cumulative annual values are computed by averaging all reported yearly calculations including partial years and all quality values (0<qcOK<1).

Avg(qcOK) > .9 and Avg(count) >= 330 | Avg(qcOK) > .9 and Avg(count) < 330
Avg(qcOK) < .9 and Avg(count) >= 330 | Avg(qcOK) < .9 and Avg(count) < 330
no qcOK and Avg(count) >= 330 | no qcOK and Avg(count) < 330

				Precip	Rd	Rg	Rn	SWC	Ta	Ts
				mm y-1	GJ m-2 y-1	GJ m-2 y-1	GJ m-2 y-1	m-3 m-3	°C	°C
16	AT-Neu	Austria - Neustift/Stubai Valley	GRA	1,284.3359		4.2914	1.3867	31.8751	6.7856	8.4992
17	AU-How	Australia - Howard Springs	WSA	1,630.2953		6.7924	4.0136	10.3777	25.8592	30.0698
18	AU-Tum	Australia - Tumbarumba	EBF	1,123.3560		5.5826	2.8324		9.3362	10.4106
19	AU-Wac	Australia - Wallaby Creek	EBF	502.5000	0.6694	3.0775	2.1541	23.9029	12.6435	9.4259
20	BE-Bra	Belgium - Brasschaat (De Inslag	MF	822.3947		3.5614	1.8303		11.3368	10.5127
21	BE-Jal	Belgium - Jalhay	MF	1,633.4386		3.2393	1.1563	54.2106	7.8948	9.4101
22	BE-Lon	Belgium - Lonzee	CRO	653.7283		3.8493	1.8859	28.0118	10.8849	11.9498
23	BE-Vie	Belgium - Vielsalm	MF	821.0230		3.4672	2.1690		8.3050	8.2217
24	BR-Ban	Brazil - Ecotone Bananal Island	EBF	1,003.0873		5.2805	3.1911	44.9871	26.4378	23.0225
25	BR-Cax	Brazil - Caxiuana Forest-Almeirim	EBF	1,465.3309		5.5755	4.8808	38.9164	26.0343	25.1231
26	BR-Ji1	Brazil - Rond.- Faz. Nossa Senhora-i	GRA			5.8743			24.7717	
27	BR-Ji2	Brazil - Rond.- Rebio Jaru Ji Parana-	EBF	1,646.9595		5.8398			25.2900	
28	BR-Ma2	Brazil - Manaus - ZF2 K34	EBF	3,030.4915		5.6821	4.1181		25.8418	
29	BR-Sa1	Brazil - Santarem-Km67-Primary	EBF	1,592.8216		4.9170	4.0455		25.2805	25.4571
30	BR-Sa2	Brazil - Santarem-Km77-Pasture	CRO	1,284.4250		6.3279		25.8696	26.0437	28.7781
31	BR-Sa3	Brazil - Santarem-Km83-Logged	EBF	1,044.9477		5.4836	3.3737	96.2072	25.9914	
32	BR-Sp1	Brazil - Sao Paulo Cerrado	EBF	952.8175		6.8634	4.2365	82.5940	22.6973	
33	BW-Ghg	Botswana - Ghanzi Grass Site	SAV	0.0000		3.1845	0.2689		25.2471	28.8904
34	BW-Ghm	Botswana - Ghanzi Mixed Site	WSA	0.0000		3.1228	0.3176		26.2237	29.7951
35	BW-Ma1	Botswana - Maun- Mopane	WSA	268.6420		7.7346	4.2583	5.2673	22.8255	26.4727
36	CA-Ca1	Canada - British Columbia-	ENF	1,280.0169	6.1203	3.9407	2.1811	15.5982	8.6743	8.1897







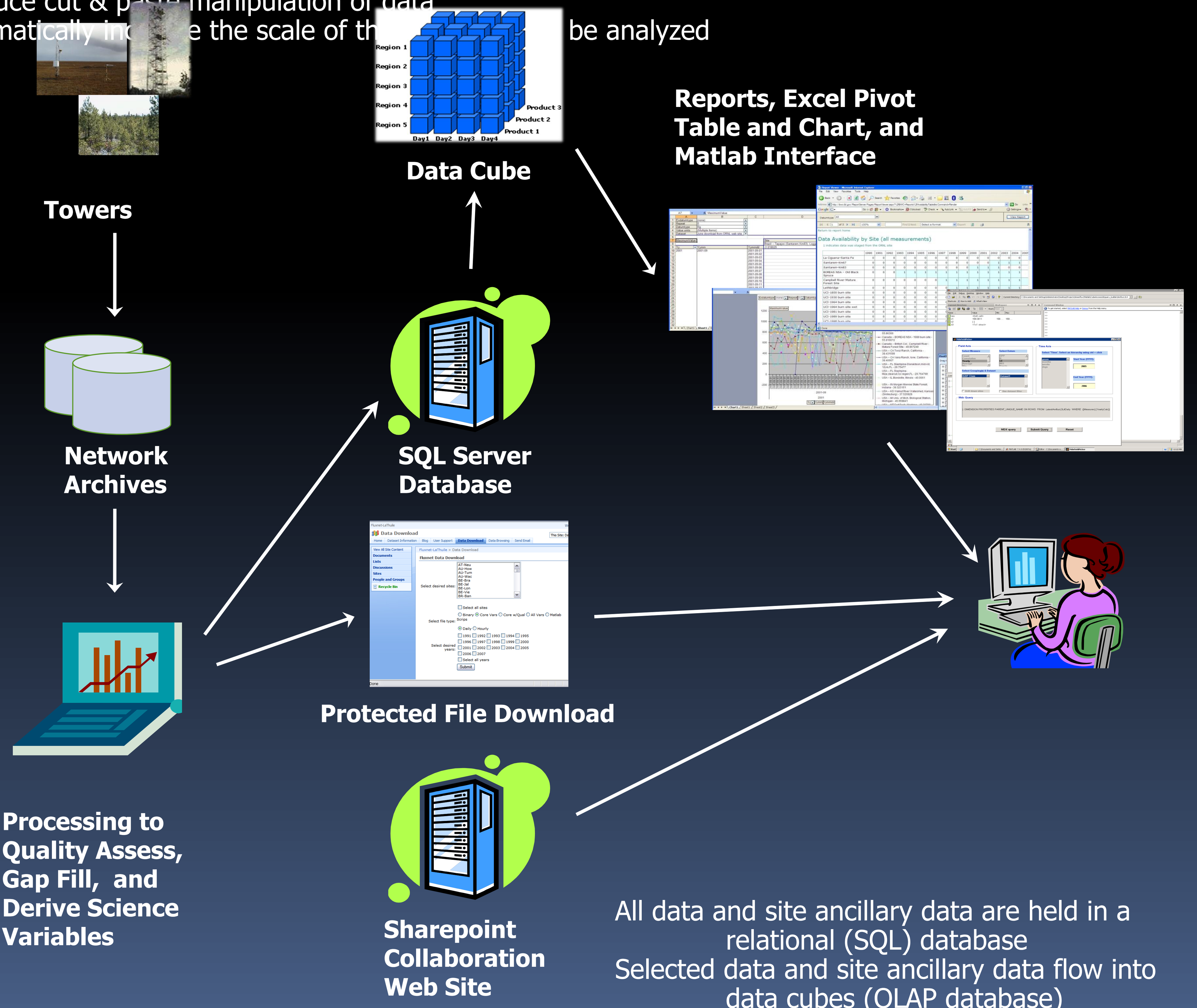
This dataset was produced in association with the FLUXNET-TCO synthesis workshop held in LaThuile, Italy, from February 18 to 22, 2007. The aim of the workshop was to produce a new and extensive FLUXNET dataset and start first analyses. The workshop was attended by 60 scientists, who represented a cross section of younger and established scientists and were members of regional networks from around the world: CarboeuropeIP, Ameriflux, Fluxnet-Canada, LBA, Asiaflux, Chinaflux, USCCC, Ozflux, Carboafrica, Koflux, NECC, TCOS-Siberia and Afriflux.

Fluxnet data server – www.fluxdata.org

- Common data repository capturing provenance information and common data processing
- Ancillary and biological data incorporated
- Data browsing, mining, and plotting capabilities
- Data repository that is easy to maintain, load with data, and expand capabilities
- Collaboration space to enable interaction between PIs and proposers and among proposal teams
- Data download and access (protected and tracked)

Reduce cut & paste manipulation of data

Dramatically increase the scale of the data to be analyzed



All data and site ancillary data are held in a relational (SQL) database

Selected data and site ancillary data flow into data cubes (OLAP database)

Client visualization and analysis tools query the database or data cube

URL: http://www.fluxdata.org/ For further information e-mail: fluxdata-support@george.lbl.gov